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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/049,800	11/19/2002	Robert Stephen Cooke	FHW-100US	6216
7590		07/27/2004	EXAMINER	
Lahive & Cockfield		KAO, CHIH CHENG G		
24th Floor		ART UNIT		
28 State Street		PAPER NUMBER		
Boston, MA 02109		2882		

DATE MAILED: 07/27/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/049,800

Applicant(s)

COOKE ET AL.

Examiner

Chih-Cheng Glen Kao

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 June 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12, 14, 17 and 18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12, 14 and 17 is/are rejected.
- 7) ☒ Claim(s) 18 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 December 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Specification

1. The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant's use.

Arrangement of the Specification

As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

- (a) TITLE OF THE INVENTION.
- (b) CROSS-REFERENCE TO RELATED APPLICATIONS.
- (c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT.
- (d) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC (See 37 CFR 1.52(e)(5) and MPEP 608.05. Computer program listings (37 CFR 1.96(c)), "Sequence Listings" (37 CFR 1.821(c)), and tables having more than 50 pages of text are permitted to be submitted on compact discs.) or
REFERENCE TO A "MICROFICHE APPENDIX" (See MPEP § 608.05(a). "Microfiche Appendices" were accepted by the Office until March 1, 2001.)
- (e) BACKGROUND OF THE INVENTION.
 - (1) Field of the Invention.
 - (2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.
- (f) BRIEF SUMMARY OF THE INVENTION.
- (g) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).
- (h) DETAILED DESCRIPTION OF THE INVENTION.
- (i) CLAIM OR CLAIMS (commencing on a separate sheet).
- (j) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).
- (k) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825. A "Sequence Listing" is required on paper if the application discloses a nucleotide or amino acid sequence as defined in 37 CFR 1.821(a) and if the required "Sequence Listing" is not submitted as an electronic document on compact disc).

Claim Objections

2. Claim 18 is objected to under 37 CFR 1.75(c) as being in improper form because any dependent claim which refers to more than one other claim (“multiple dependent claim”) shall refer to such other claims in the alternative only. See MPEP § 608.01(n). Accordingly, the claim has not been further treated on the merits.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claim 17 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The term “substantially as described in claim 1” fails to point out what is clearly and precisely included or excluded by the claim language. Does the claim invention include a telescopically extendable arm or not? Is the arm pivotally connected to the mounting device or not? Since the claim language as recited above creates uncertainty with regards to the metes and bounds of the claim, the claim is consequently rejected under 35 U.S.C. 112, second paragraph.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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4. Claims 1, 2, 4, 5, 7, 8, 10, 11, and 14 are rejected under 35 U.S.C. 102(b) as being anticipated by Ivan et al. (EP 0919186).

5. Regarding claim 1, Ivan et al. discloses an apparatus comprising a mounting device (Fig. 1, #58) for mounting the apparatus on a surface of a gantry (Fig. 1, A), a telescopically extendable arm (Fig. 1, #40, 42, and 44) pivotally connected (Fig. 1, #40) to the mounting device, and a holder (Fig. 1, #38) for holding the imaging device (Fig. 1, #36), wherein the holder is connected to a distal portion (Fig. 1, distal portion of #30) of the telescopically extendable arm.

6. Regarding claim 2, Ivan et al. further discloses the arm comprising two or more elongate elements (Fig. 1, #42 and 44) in slidable communication with each other.

7. Regarding claim 4, Ivan et al. further discloses the elongate elements not sharing a common central axis (Fig. 1, #42 and 44).

8. Regarding claim 5, Ivan et al. further discloses the arm pivotally mounted substantially about its centre of mass (Fig. 1, #40).

9. Regarding claim 7, Ivan et al. further discloses the holder slidably mounted so as to slide along the extendable arm (Fig. 1, #42 and 44).

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10. Regarding claim 8, Ivan et al. further discloses the holder comprising means for sliding the imaging device along an axis perpendicular to a longitudinal axis of the extendable arm (Fig. 1, #42 and 48).

11. Regarding claim 10, Ivan et al. further discloses the holder comprising means for locking a position of the imaging device (col. 5, lines 17-19).

12. Regarding claim 11, Ivan et al. further discloses means for rotating the imaging device about an axis parallel to a longitudinal axis of the extendable arm (Fig. 1, #30).

13. Regarding claim 14, Ivan et al. further discloses means for activating the apparatus (Figs. 1 and 2).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

14. Claims 1-12, 14, and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chou et al. (US Patent 4995068) in view of Nguyen et al. (US Patent 5138647).

15. Regarding claims 1 and 17, Chou et al. discloses an apparatus for positioning a device (Fig. 2A) relative to a gantry (Fig. 1, #12) of a radiation therapy device (Abstract, line 1),

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comprising a mounting device for mounting the apparatus on a surface of the gantry (Fig. 1, #30), and a telescopically extendable arm connected to the mounting device (Fig. 2A).

However, Chou et al. does not disclose an arm pivotally connected in that particular embodiment or a holder for holding an imaging device, wherein the holder is connected to a distal portion of the arm.

Chou et al. teaches an arm pivotally connected (Fig. 4, #228) in another embodiment. Nguyen et al. teaches a holder for holding an imaging device, wherein the holder is connected to a distal portion of the arm (Fig. 1, holder for #17).

It would have been obvious, to one having ordinary skill in the art at the time the invention was made, to modify the apparatus of Chou et al. with an arm pivotally connected, since one would be motivated to incorporate this arrangement to further retract the arm away (Fig. 4) as implied from Chou et al.

It would have been obvious, to one having ordinary skill in the art at the time the invention was made, to modify the apparatus of Chou et al. with the holder of an imaging device of Nguyen et al., since one would be motivated to incorporate this for greater convenience while not requiring extra space for storage (col. 2, lines 1-2) as shown by Nguyen et al.

16. Regarding claim 2, Chou et al. further discloses the arm comprising two or more elongate elements in slidable communication (Fig. 2A).

17. Regarding claim 3, Chou et al. as modified above suggests an apparatus as recited above.

However, Chou et al. does not disclose linear bearings.

Nguyen et al. teaches linear bearings (col. 3, lines 55-57).

It would have been obvious, to one having ordinary skill in the art at the time the invention was made, to further modify the apparatus of Chou et al. with the linear bearings of Nguyen et al., since one would be motivated to use these for easier operation of the arm (col. 3, lines 55-58) as shown by Nguyen et al.

18. Regarding claim 4, Chou et al. further discloses the elongate arms not sharing a common central axis (Fig. 2A, #123 and 124).

19. Regarding claims 5 and 6, Chou et al. as modified above suggests an apparatus as recited above.

However, Chou et al. does not disclose mounting substantially about the center of mass of the arm and imaging device.

It would have been obvious, to one having ordinary skill in the art at the time the invention was made, to further modify the apparatus of Chou et al. as modified above with mounting substantially about the center of mass, since rearranging parts of an invention involves only routine skill in the art. One would be motivated to have such an arrangement to provide a connection point that does not have as much strain.

20. Regarding claim 7, Chou et al. further discloses a holder slidably mounted so as to slide along the extendable arm (Fig. 1, #122).

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21. Regarding claim 8, Chou et al. further discloses a holder comprising means for sliding the imaging device along an axis perpendicular to a longitudinal axis of the arm (Fig. 1, #30).

22. Regarding claim 9, Chou et al. as modified above suggests an apparatus as recited above.

However, Chou et al. does not disclose the holder as detachable.

Nguyen et al. further teaches the holder as detachable (Fig. 7, screws).

It would have been obvious, to one having ordinary skill in the art at the time the invention was made, to further modify the apparatus of Chou et al. with the detachable holder of Nguyen et al., since one would be motivated to incorporate this as a way to fix the part in another location without having to take the entire apparatus.

23. Regarding claim 10, Chou et al. as modified above suggests an apparatus as recited above.

However, Chou et al. does not disclose the holder comprising means for locking a position of the imaging device.

Nguyen et al. teaches the holder comprising means for locking a position of the imaging device (Fig. 8).

It would have been obvious, to one having ordinary skill in the art at the time the invention was made, to further modify the apparatus of Chou et al. with the locking means of Nguyen et al., since one would be motivated to incorporate this to hold the arm in place (Fig. 8) as implied from Nguyen et al.

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24. Regarding claim 11, Chou et al. further discloses means for rotating the imaging device about an axis parallel to a longitudinal axis of the arm (col. 2, lines 15-16).

25. Regarding claim 12, Chou et al. further discloses counterbalancing means for holding the arm under gravity (Fig. 1, #30).

26. Regarding claim 14, Chou et al. further discloses means for activating (Fig. 2A and 2B).

Response to Arguments

27. Objections to claims 1, 10, and 17 in the Office Action mailed on December 22, 2003, have been withdrawn in light of the Amendment filed 6/22/04.

28. Applicant's arguments filed 6/22/04 have been fully considered but they are not persuasive.

Regarding objections to claim 18, 37 CFR 1.75(c) states that any dependent claim which refers to more than one other claim ("multiple dependent claim") shall refer to such other claims in the alternative only. In this case, claim 18 refers to claim 1 and claim 14. However, claim 18 does not refer to claim 1 and claim 14 in the alternative only. Therefore, claim 18 is objected to under 37 CFR 1.75(c).

Regarding claim rejections under 35 U.S.C. 103, Applicant argues that there is no suggestion or motivation in Chou et al. that the pivotal embodiment be combined with the telescopic embodiment. Applicant also argues that Chou et al. teaches away from such an embodiment. The Examiner disagrees. The embodiments shown by Chou et al. are only some

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preferred embodiments. One of ordinary skill in the art would recognize that the invention of Chou et al. is not limited to those precise embodiments. Rather, many modifications and variations, such as combinations, would present themselves to those of skill in the art without departing from the scope and spirit of the invention. Therefore, Chou et al. suggests the desirability of such a combination. Such a combination would not change the principle of operation of the reference, that principle being withdrawal or retraction from the patient treatment table when the detector is not required for imaging (col. 1, line 67, to col. 2, line 2). Such a combination would have some sort of desirability, thus teaching towards such an embodiment. Therefore, there is some suggestion or motivation in Chou et al. to combine the pivotable embodiment with the telescopic embodiment.

Applicant further argues with regards to Chou et al. for failing to suggest a detachable imaging device. However, the Examiner notes that Chou et al. is not relied upon for such a disclosure or teaching. Furthermore, it is noted that the detachable imaging device upon which Applicant relies is not recited in claim 1. Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. Therefore, this argument does not relate to the patentability of claim 1 by itself.

In response to applicant's argument that the retractable arm of Nguyen et al. would not be compatible with the hinged arrangement of Chou et al., the test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art.

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In conclusion and upon further consideration of Applicant's arguments, there is still suggestion or motivation to combine or modify the teachings of Chou et al. and Nguyen et al., and thus teach or suggest all the limitations of claim 1, to one of ordinary skill in the art at the time the invention was made.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chih-Cheng Glen Kao whose telephone number is (571) 272-2492. The examiner can normally be reached on M - F (9 am to 5 pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ed Glick can be reached on (571) 272-2490. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


gk


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